

International Searching Authority
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P.B. 5818 Patentlaan 2
NL -2280 HV Rijswijk

DT11 Rec'd PCT/PTO 12 JUL 2004

For the attention of Ms Nina Vercio

7 July 2003

Our ref: 9248 WO JSvn/TJH
By Hand

Dear Sirs,

International Patent Application No PCT/GB03/00062
Imperial College Innovations Ltd.

In response to your communication of 10 June 2003 I enclose a corrected sequence listing in both written and computer readable form. I also enclose, in triplicate, amended pages 94 and 95 of the description, together with a manuscript amended version of pages 94 and 95.

It was pointed out in your letter of 10 June 2003 that the sequence listing filed previously contains an incorrect amino acid "The" in SEQ.ID.Nos: 336-339.

It is submitted that the incorrect designation of the amino acid "The" in SEQ.ID.Nos: 336-339 as present in the sequence listing and in the description, see page 94 line 21 to page 95 line 10, is an obvious error and rectification by replacement of the incorrect designation of the amino acid "The" by the correct designation "Thr" is requested under Rule 91 PCT.

The error is a typographical error ("e" and "r" are adjacent keys on the keyboard). It is submitted that it is obvious that something other than what was intended was written because there is no amino acid designated "The". The error is therefore an obvious error within the terms of Rule 91 PCT. The rectification requested is itself obvious in the sense that anyone would realise that nothing else could have been intended that what is offered as rectification. It is submitted that it is immediately apparent that "The" is a typographical error for "Thr". Also, the SEQ.ID.Nos. 336-339 relate to GLP-1 peptides. GLP-1 is a known peptide, see for example, WO 99/47161, page 8 lines 4 to 20, a copy of which is enclosed. As can be seen from page 8 of WO 99/47161, the GLP-1 amino acid sequence contains a "Thr" residue at the position where "The" was incorrectly given in SEQ.ID.Nos. 336-339.

Continued 1/2...

Best Available Copy

Abel & Imray · 20 Red Lion Street · London · WC1R 4PQ · UK
Tel: +44 (0) 20 7242 9984 and +44 (0) 20 7405 0203 · Fax: +44 (0) 20 7242 9989

Partners: · A Coulson M.A. · P J Barry Esq. · Janet Senior M.A. · J E Bardo M.A. · R D Main M.A. · C A A Humphreys Esq. · J C Legg M.A. · J G Pearson Esq. · J E Denness Esq. · M P Carthen Esq. · S M Bentley M.A. · J V Neuford Esq. · Hazel Hearn · G G Leila Esq. · P A Brady M.A. · G Whiting M.A.
Consultants: · D L Darby Esq. · G L K Stallard Esq. · J M Rendall Esq. · Susan M Scott M.A. Practice Managers: J D Friend Esq.

· European and UK Patent Attorney · European and UK Trade Mark Attorney · European Trade Mark Attorney · UK Patent Attorney · European Patent Attorney

Taking into account the request for correction set out above, I hereby certify that the contents of the sequence listing enclosed does not go beyond the disclosure of the International application as filed. I also certify that the information recorded in computer readable form on the enclosed floppy disk is identical to the enclosed written sequence listing.

Please acknowledge receipt of this letter by stamping and returning the attached Form 1037.

Yours faithfully,

A handwritten signature in black ink, appearing to read "Judith Silveston". The signature is fluid and cursive, with the first name "Judith" and last name "Silveston" clearly distinguishable.

Judith Silveston

Agent

Direct dial: +44 20 7440 8242

enc

acceptable related compositions, may be made, as long as the desired human appetite control is achieved. These modifications are included in the scope of this invention.

Mammalian GLP peptides and glucagon are encoded by the same gene.

5 In the ileum the phenotype is processed into two major classes of GLP-peptide hormones, namely GLP-1 and GLP-2. There are four GLP-1 related peptides known which are processed from the phenotypic peptides. GLP-1 (1-37) has the sequence His Asp Glu Phe Glu Arg His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly Gln Ala Ala Lys Glu Phe He Ala Trp Leu Val Lys

10 Gly Arg Gly (SEQ. ID NO:1). GLP-1 (1-37) is amidated by post translational processing to yield GLP-1 (1-36) NH, which has the sequence His Asp Glu Phe Glu Arg His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly Gln Ala Ala Lys Glu Phe He Ala Trp Leu Val Lys Gly Arg (NH₂ (SEQ. ID NO:2); or is enzymatically processed to yield GLP-1 (7-37) which has the

15 sequence His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly Gln Ala Ala Lys Glu Phe He Ala Trp Leu Val Lys Gly Arg Gly (SEQ. ID NO:3). GLP-1 (7-37) can also be amidated to yield GLP-1 (7-36) amide which has the sequence His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly Gln Ala Ala Lys Glu Phe He Ala Trp Leu Val Lys Gly Arg (NH₂ (SEQ. ID

20 NO:4).

Intestinal L cells secrete GLP-1 (7-37) (SEQ. ID NO:3) and GLP-1 (7-36) NH₂ (SEQ. ID NO:4) in a ratio of 1 to 5 respectively. These truncated forms of GLP-1 *in situ* have short half-lives, i.e., less than 10 minutes, and are inactivated by an aminodipeptidase IV to yield Glu Gly Thr Phe Thr Ser Asp

25 Val Ser Ser Tyr Leu Glu Gly Gln Ala Ala Lys Glu Phe He Ala Trp Leu Val Lys Gly Arg Gly (SEQ. ID NO:5); and Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly Gln Ala Ala Lys Glu Phe He Ala Trp Leu Val Lys Gly Arg (NH₂) (SEQ. ID NO:6), respectively. The peptides Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly Gln Ala Ala Lys Glu Phe He Ala Trp Leu Val

30 Lys Gly Arg Gly (SEQ. ID NO:5) and Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly Gln Ala Ala Lys Glu Phe He Ala Trp Leu Val Lys Gly Arg

Preferred aryl groups are C₆₋₁₄ aryl groups and typically include phenyl, naphthyl, fluorenyl, phenanthryl, and anthracyl groups.

Typical alkyl substituted aryl groups include any of the above aryl groups substituted by any of the C₁₋₆ alkyl groups, including the group Ph(CH₂)_n, where n is 1-6, for example, tolyl, o-, m-, and p-xylyl, ethylphenyl, 1-propylphenyl, 2-propylphenyl, 1-butylphenyl, 2-butylphenyl, t-butylphenyl, 1-pentylphenyl, 2-pentylphenyl, 3-pentylphenyl.

Typical cycloalkyl groups include C₃₋₈ cycloalkyl groups including cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cycloheptyl and cyclooctyl groups.

Typical electron withdrawing groups include O, NR₁, S, SO and SO₂, wherein R₁ is defined above.

GLP-1 and Agonists Thereof

15

GLP-1 is produced from preproglucagon, which is a 160 amino acid polypeptide, in the central nervous system (CNS) and the intestine. It is released into the circulation in response to nutrient intake. Physiological actions of GLP-1 in man include stimulation of insulin release, suppression of gastric acid secretion and slowing of gastric emptying.

GLP-1 (1-37) (SEQ ID NO: 336) is the initial product of the processing of preproglucagon. GLP-1 (1-37) is amidated by post-translational processing to yield GLP-1 (1-36) NH (SEQ ID NO 337), or is enzymatically processed to give GLP-1 (7-37) (SEQ ID NO: 338). GLP-1 (7-37) can be amidated to give GLP-1 (7-36) amide (SEQ ID NO: 339). The sequences of human GLP-1 are given below:

25

GLP-1 (1-37): His Asp Glu Phe Glu Arg His Ala Glu Gly Thr Phe ^{Thr}~~Leu~~ Ser Asp
Val Ser Ser Tyr Leu Glu Gly Gly Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly
Arg Gly (SEQ ID NO: 336).

30

GLP-1 (1-36) amide: His Asp Glu Phe Glu Arg His Ala Glu Gly Thr Phe ^{Thr}~~Thr~~ Ser
Asp Val Ser Ser Tyr Leu Glu Gly Gly Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys
Gly Arg NH₂ (SEQ ID NO: 337),

5 GLP-1 (7-37): His Ala Glu Gly Thr Phe ^{Thr}~~Thr~~ Ser Asp Val Ser Ser Tyr Leu Glu Gly
Gly Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg Gly (SEQ ID NO: 338).

GLP-1 (7-36) amide: His Ala Glu Gly Thr Phe ^{Thr}~~Thr~~ Ser Asp Val Ser Ser Tyr Leu
Glu Gly Gly Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg NH₂
10 (SEQ ID NO: 339).

A GLP-1 agonist is a peptide, small molecule, or chemical compound that
preferentially binds to the GLP-1 receptor and stimulates the same biological
activity as does GLP-1. In one embodiment, an agonist for the GLP-1 receptor
15 binds to the receptor with an equal or greater affinity than GLP-1. In another
embodiment, an agonist selectively binds the GLP-1 receptor, as compared to
binding to another receptor. Exendin-4, which is a 39-amino acid peptide isolated
from the salivary glands of the Gila monster (*Heloderma suspectum*) (Eng J et al J
Biol Chem 267:7402-7405, 1992) is an example of an agonist at the GLP-1 receptor.
20 Molecules derived from exendin-4 and that also have GLP-1 agonist activity are
further examples of GLP-1 agonists. GLP-1 agonists include GLP-1 related
peptides and peptides that result from natural or synthetic enzymatic or chemical
processing of preproglucagon or of a GLP-1 peptide or a related peptide.

Any compound that is described as being a GLP-1 agonist may be used in
25 the present invention, as may any compound that is tested for GLP-1 agonist
activity, for example, as described above, and found to function as a GLP-1 agonist.
A recombinant GLP-1 receptor suitable for use in screening is disclosed in
WO93/19175. Many GLP-1 agonists are known and are described in the art.
Examples of published patent specifications that disclose GLP-1 agonists are the
30 following: WO2002/67918, WO2002/66479, WO2002/03978, WO2001/89554,
WO2001/14386, WO2001/66135, WO2001/35988, WO2001/14368,
WO2001/04156, WO2000/78333, WO2000/59887, WO2000/42026, EP 0955314,

Preferred aryl groups are C₆₋₁₄ aryl groups and typically include phenyl, naphthyl, fluorenyl, phenanthryl, and anthracyl groups.

Typical alkyl substituted aryl groups include any of the above aryl groups substituted by any of the C₁₋₆ alkyl groups, including the group Ph(CH₂)_n, where n is 1-6, for example, tolyl, o-, m-, and p-xylyl, ethylphenyl, 1-propylphenyl, 2-propylphenyl, 1-butylphenyl, 2-butylphenyl, t-butylphenyl, 1-pentylphenyl, 2-pentylphenyl, 3-pentylphenyl.

Typical cycloalkyl groups include C₃₋₈ cycloalkyl groups including cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cycloheptyl and cyclooctyl groups.

Typical electron withdrawing groups include O, NR₁, S, SO and SO₂, wherein R₁ is defined above.

GLP-1 and Agonists Thereof

15

GLP-1 is produced from preproglucagon, which is a 160 amino acid polypeptide, in the central nervous system (CNS) and the intestine. It is released into the circulation in response to nutrient intake. Physiological actions of GLP-1 in man include stimulation of insulin release, suppression of gastric acid secretion and slowing of gastric emptying.

GLP-1 (1-37) (SEQ ID NO: 336) is the initial product of the processing of preproglucagon. GLP-1 (1-37) is amidated by post-translational processing to yield GLP-1 (1-36) NH (SEQ ID NO 337), or is enzymatically processed to give GLP-1 (7-37) (SEQ ID NO: 338). GLP-1 (7-37) can be amidated to give GLP-1 (7-36) amide (SEQ ID NO: 339). The sequences of human GLP-1 are given below:

25

GLP-1 (1-37): His Asp Glu Phe Glu Arg His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly Gly Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg Gly (SEQ ID NO: 336).

30

GLP-1 (1-36) amide: His Asp Glu Phe Glu Arg His Ala Glu Gly Thr Phe Thr Ser
Asp Val Ser Ser Tyr Leu Glu Gly Gly Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys
Gly Arg NH₂ (SEQ ID NO: 337),

- 5 GLP-1 (7-37): His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
Gly Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg Gly (SEQ ID NO: 338).

- GLP-1 (7-36) amide: His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu
Glu Gly Gly Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg NH₂
10 (SEQ ID NO: 339).

- A GLP-1 agonist is a peptide, small molecule, or chemical compound that
preferentially binds to the GLP-1 receptor and stimulates the same biological
activity as does GLP-1. In one embodiment, an agonist for the GLP-1 receptor
15 binds to the receptor with an equal or greater affinity than GLP-1. In another
embodiment, an agonist selectively binds the GLP-1 receptor, as compared to
binding to another receptor. Exendin-4, which is a 39-amino acid peptide isolated
from the salivary glands of the Gila monster (*Heloderma suspectum*) (Eng J et al J
Biol Chem 267:7402-7405, 1992) is an example of an agonist at the GLP-1 receptor.
20 Molecules derived from exendin-4 and that also have GLP-1 agonist activity are
further examples of GLP-1 agonists. GLP-1 agonists include GLP-1 related
peptides and peptides that result from natural or synthetic enzymatic or chemical
processing of preproglucagon or of a GLP-1 peptide or a related peptide.

- Any compound that is described as being a GLP-1 agonist may be used in
25 the present invention, as may any compound that is tested for GLP-1 agonist
activity, for example, as described above, and found to function as a GLP-1 agonist.
A recombinant GLP-1 receptor suitable for use in screening is disclosed in
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Examples of published patent specifications that disclose GLP-1 agonists are the
30 following: WO2002/67918, WO2002/66479, WO2002/03978, WO2001/89554,
WO2001/14386, WO2001/66135, WO2001/35988, WO2001/14368,
WO2001/04156, WO2000/78333, WO2000/59887, WO2000/42026, EP 0955314,

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<211> 34
 <212> PRT
 <213> Homo sapiens

<400> 334

Ile Lys Pro Glu Ala Pro Gly Glu Asp Ala Ser Pro Glu Glu Leu Asn
 1 5 10 15

Arg Tyr Tyr Ala Ser Leu Arg His Tyr Leu Asn Leu Val Thr Arg Gln
 20 25 30

Arg Tyr

<210> 335
 <211> 34
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Polypeptide variation

<400> 335

Ser Lys Pro Asp Asn Pro Gly Glu Asp Ala Pro Ala Glu Asp Met Ala
 1 5 10 15

Arg Tyr Tyr Ser Ala Leu Arg His Tyr Ile Asn Leu Ile Thr Arg Gln
 20 25 30

Arg Tyr

<210> 336
 <211> 37
 <212> PRT
 <213> Homo sapiens

<400> 336

His Asp Glu Phe Glu Arg His Ala Glu Gly Thr Phe Thr Ser Asp Val
 1 5 10 15

Ser Ser Tyr Leu Glu Gly Gly Ala Ala Lys Glu Phe Ile Ala Trp Leu
 20 25 30

Val Lys Gly Arg Gly
 35

<210> 337
 <211> 36
 <212> PRT
 <213> Homo sapiens

<220>
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 <222> (36)..(36)
 <223> C terminus is bonded to NH2

<400> 337

His Asp Glu Phe Glu Arg His Ala Glu Gly Thr Phe Thr Ser Asp Val
 1 5 10 15

Ser Ser Tyr Leu Glu Gly Gly Ala Ala Lys Glu Phe Ile Ala Trp Leu
20 25 30

Val Lys Gly Arg
35

<210> 338
<211> 31
<212> PRT
<213> Homo sapiens

<400> 338

His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15

Gly Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg Gly
20 25 30

<210> 339
<211> 30
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (30)..(30)
<223> C terminus is bonded to NH2

<400> 339

His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15

Gly Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg
20 25 30

<210> 340
<211> 37
<212> PRT
<213> Homo sapiens

<400> 340

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr Lys Arg Asn
20 25 30

Lys Asn Asn Ile Ala
35

<210> 341 <211> 463 <212> PRT <213> homo sapiens <400> 341

Met Ala Gly Ala Pro Gly Pro Leu Arg Leu Ala Leu Leu Leu Gly
1 5 10 15

Met Val Gly Arg Ala Gly Pro Arg Pro Gln Gly Ala Thr Val Ser Leu

20

25

30

Trp Glu Thr Val Gln Lys Trp Arg Glu Tyr Arg Arg Gln Cys Gln Arg
 35 40 45

Ser Leu Thr Glu Asp Pro Pro Pro Ala Thr Asp Leu Phe Cys Asn Arg
 50 55 60

Thr Phe Asp Glu Tyr Ala Cys Trp Pro Asp Gly Glu Pro Gly Ser Phe
 65 70 75 80

Val Asn Val Ser Cys Pro Trp Tyr Leu Pro Trp Ala Ser Ser Val Pro
 85 90 95

Gln Gly His Val Tyr Arg Phe Cys Thr Ala Glu Gly Leu Trp Leu Gln
 100 105 110

Lys Asp Asn Ser Ser Leu Pro Trp Arg Asp Leu Ser Glu Cys Glu Glu
 115 120 125

Ser Lys Arg Gly Glu Arg Ser Ser Pro Glu Glu Gln Leu Leu Phe Leu
 130 135 140

Tyr Ile Ile Tyr Thr Val Gly Tyr Ala Leu Ser Phe Ser Ala Leu Val
 145 150 155 160

Ile Ala Ser Ala Ile Leu Leu Gly Phe Arg His Leu His Cys Thr Arg
 165 170 175

Asn Tyr Ile His Leu Asn Leu Phe Ala Ser Phe Ile Leu Arg Ala Leu
 180 185 190

Ser Val Phe Ile Lys Asp Ala Ala Leu Lys Trp Met Tyr Ser Thr Ala
 195 200 205

Ala Gln Gln His Gln Trp Asp Gly Leu Leu Ser Tyr Gln Asp Ser Leu
 210 215 220

Ser Cys Arg Leu Val Phe Leu Leu Met Gln Tyr Cys Val Ala Ala Asn
 225 230 235 240

Tyr Tyr Trp Leu Leu Val Glu Gly Val Tyr Leu Tyr Thr Leu Leu Ala
 245 250 255

Phe Ser Val Phe Ser Glu Gln Trp Ile Phe Arg Leu Tyr Val Ser Ile
 260 265 270

Gly Trp Gly Val Pro Leu Leu Phe Val Val Pro Trp Gly Ile Val Lys
 275 280 285

Tyr Leu Tyr Glu Asp Glu Gly Cys Trp Thr Arg Asn Ser Asn Met Asn
290 295 300

Tyr Trp Leu Ile Ile Arg Leu Pro Ile Leu Phe Ala Ile Gly Val Asn
305 310 315 320

Phe Leu Ile Phe Val Arg Val Ile Cys Ile Val Val Ser Lys Leu Lys
325 330 335

Ala Asn Leu Met Cys Lys Thr Asp Ile Lys Cys Arg Leu Ala Lys Ser
340 345 350

Thr Leu Thr Leu Ile Pro Leu Leu Gly Thr His Glu Val Ile Phe Ala
355 360 365

Phe Val Met Asp Glu His Ala Arg Gly Thr Leu Arg Phe Ile Lys Leu
370 375 380

Phe Thr Glu Leu Ser Phe Thr Ser Phe Gln Gly Leu Met Val Ala Ile
385 390 395 400

Leu Tyr Cys Phe Val Asn Asn Glu Val Gln Leu Glu Phe Arg Lys Ser
405 410 415

Trp Glu Arg Trp Arg Leu Glu His Leu His Ile Gln Arg Asp Ser Ser
420 425 430

Met Lys Pro Leu Lys Cys Pro Thr Ser Ser Leu Ser Ser Gly Ala Thr
435 440 445

Ala Gly Ser Ser Met Tyr Thr Ala Thr Cys Gln Ala Ser Cys Ser
450 455 460

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

ABEL & IMRAY
Attn. Silveston, Judith
20 Red Lion Street
London WC1R 4PQ
UNITED KINGDOM

ABEL & IMRAY	
CASE NO.	9248
G.O.	JS
12 JUN 2003	
A/C?	Y (N)
CPA?	Y (N)
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INVITATION TO FURNISH NUCLEOTIDE
AND/OR AMINO ACID SEQUENCE LISTING
COMPLYING WITH WIPO STANDARD ST25

(PCT Rule 13ter.1(a) and (c) and
Administrative Instructions, Section 208 and Annex C)

Date of mailing
(day/month/year)

10/06/2003

Applicant's or agent's file reference

JSvn/9248

REPLY DUE

within 1 months/days
from the above date of mailing

International application No.

PCT/GB 03/ 00062

International filing date

(day/month/year)

10/01/2003

Applicant

IMPERIAL COLLEGE INNOVATIONS LTD

1. The applicant is hereby **invited**, within the time limit indicated above, to furnish to this Authority:



a nucleotide and/or amino acid sequence listing **in written form** complying with the standard provided for in Annex C of the Administrative Instructions, accompanied by a **statement** to the effect that the sequence listing does not go beyond the disclosure in the international application as filed.



a **statement** to the effect that the sequence listing in written form, already furnished to this Authority, does not go beyond the disclosure in the international application as filed.



a nucleotide and/or amino acid sequence listing **in computer readable form** complying with the standard provided for in Annex C of the Administrative Instructions, accompanied by a **statement** that the information recorded in computer readable form is identical to the written sequence listing.



a **statement** that the information recorded in computer readable form (that computer readable form having already been furnished to this Authority) is identical to the written sequence listing.

2. **Failure to comply with this invitation** may result in this Authority not carrying out the international search to the extent that no meaningful search can be carried out.

3. Further observations (if necessary):

IMPORTANT REMARK

The statements are legally required [See Suppl.No.2 to Official Journal No.11/1998 (page 14, ψ 37 & 40 and page 64, ψ III.2)]

Name and mailing address of the International Searching Authority



European Patent Office, P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Nina Vermeir



Office Européen des Brevets
Europäisches Patentamt
European Patent Office

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Storage and Retrieval of Amino acid and Nucleotide Data

Ms. Nina Vercio
P.B. 5818 Patentlaan 2
Fax : + 31 70 340 39 92

NL-2280 HV Rijswijk
Tel. : + 31 70 340 2842

ANNEX

Dear applicant/representative,

Present application contains amino acid/nucleotide sequences.

According to Supplement 2 to the Official Journal Nr.11/98 of the EPO [& Rule 5.2. PCT], if nucleotide / amino acid sequences are disclosed in a European/International patent application, the description shall contain a *sequence listing* complying with WIPO standard ST. 25.

According to our verification the Sequence Listing on paper and on electronical medium which has been sent to us is not correct.

Namely, we observed that SEQ.ID.NO. 336-339 contain an incorrect amino acid "The", please check.

The applicant is herewith invited to file the correct Sequence Listing, both on paper and in computer readable form.

The expressions nucleotide and amino acid sequences mean an unbranched of ten or more contiguous nucleotides and an unbranched sequence of four or more contiguous amino acids. Nucleotide sequences shorter than 10 contiguous nucleotides and amino acids sequences shorter than 4 residues must not be included in a sequence listing.

The ISA hereby invites the applicant to submit a sequence listing, with appropriate annotations for each sequence [where applicable], both on paper and in computer readable form, accompanied by the appropriate statements.

Relating to this, we remind you that if these requirements are not met or not met in due time, the EPO does not perform the international search where a meaningful search cannot be carried out (Rule 13^{ter}.1(c)PCT). In this case the international search report is replaced in full or in part by the statement under Article 17(2)(a)(ii)PCT.

Moreover Rule 13^{ter}(f) prescribes that a subsequently filed sequence listing, which is not a correction within the meaning of rule 26.4 PCT and which is not a rectification within the meaning of Rule 91.1.PCT of a sequence listing, shall not form part of the international application. In accordance herewith, the furnishing of a subsequently filed sequence listing does not give rise to an opportunity either to amend the description, claims and figures with a view to refer to said subsequently filed sequence listing or add it to the application as originally filed. The subsequently furnished listing will therefore normally not be forwarded to the international Bureau for publication purposes.

We strongly recommend the applicant to use the PatentIn software to submit the sequence listing. (If problems arise with the download of the PatentIn software, a CD-ROM copy can be obtained from the EPO via e-mail to dochelp@epo.org).

The computer readable form of the Sequence Listing in ASCII format (text only) is mandatory. For further questions do not hesitate to contact us.

Please send sequence listing on paper and in computer-readable form preferably to the European Patent Office, Strand Program, Directorate Documentation, Ms. Nina Vercio, Room S 02 K 02, Patentlaan 2, NL 2288 EE Rijswijk, The Netherland

REMARK:

The new PatentIn is available on our EPO website with following address:

www.european-patent-office.org/filingsoft/strand

Download is performed from that site .

Please read carefully the information provided on that site.

The downloaded install.exe file can be used
for the installation of the new version from PatentIn.
W_UPATIN.EXE is the file to start PatentIn

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with our Helpdesk epoline@epo.org.